Cabinet Office

- Setting standards and policy
- Building a profession
- Better use of data
- Reducing harm and loss

UK Government Cabinet Office

UK big picture -

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February 2020

Government Counter Fraud Function

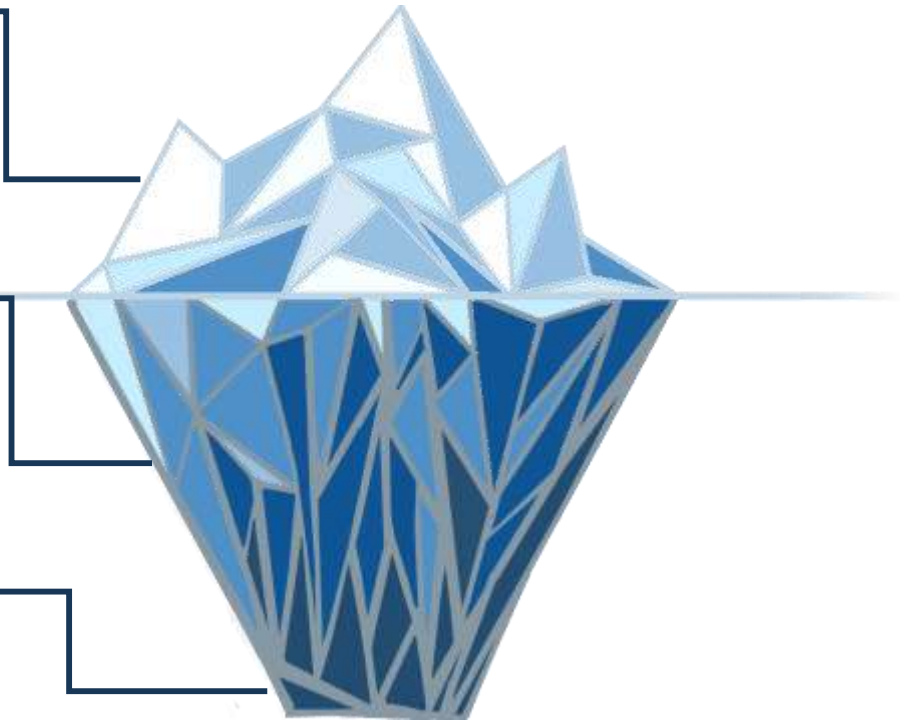
No man is an island…….but some of us are a wee bit chilly

The best evidence we have suggests there could be significant fraud not being detected with the total estimated fraud & error loss per year ranging from £31 - £53 billion

Detected
In 2018-19, government detected around £10.4bn of fraud and error, which includes welfare and tax. This figure represented the tip of the iceberg.

Estimated
Just below the surface, government estimates £29.1bn of fraud and error. These are estimates from loss measurement programmes in areas such as welfare, tax credit and health; and also includes the tax gap.

Unknown
Deep below the surface, there is the unknown element: £2.4bn - £23.7bn. This is calculated as 0.5% - 5% of annual government expenditure.



Government Counter Fraud Function

You cannot investigate your way out of fraud

Fraud is a Complex, Diverse and Evolving Crime

- The Crime Survey for England and Wales recognises fraud as being one of most prevalent crimes in society today. Perpetrators vary from opportunistic individuals to serious and organised criminals from the UK and beyond.
- The advent of digital channels has created new risks and made it easier for people to commit fraud.
- Fraud presents a risk to individuals and public bodies. The scale and sophistication of fraud continues to increase.

You Can't Fight it If You Don't Find It

- Public bodies should not wait or rely on others to find and uncover it. Today, mature organisations take proactive control of their own fraud risk through investment in, or access to, counter fraud capability in the form of skilled, experienced individuals equipped with effective tools.

There Is No Silver Bullet

- All parts of the counter fraud community need to work together to fight fraud.

Government Counter Fraud Function

The Functional Standards – driving improvement

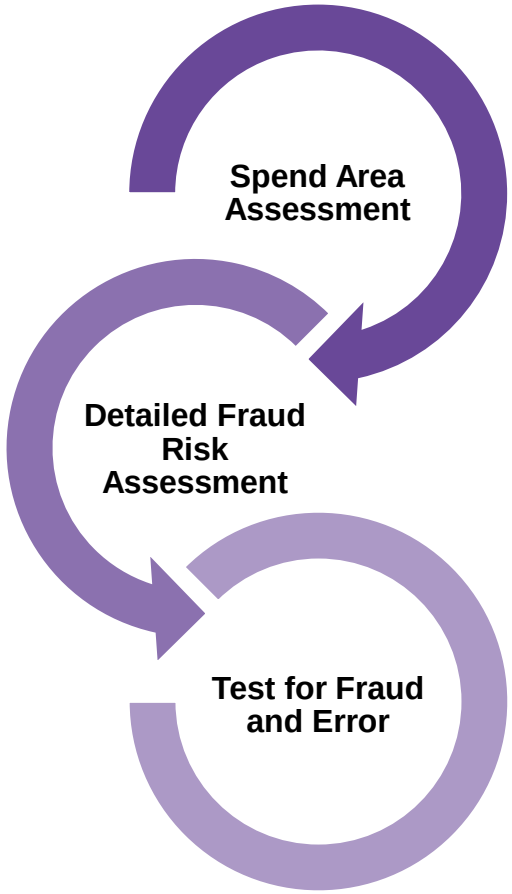
The Functional Standard sets out the basics that public bodies should have in place to find and fight fraud. All public bodies should understand and seek to met the standard. Every year, public bodies responsible for more than £100m are reviewed against the standard. The results of these reviews are published in the annual Fraud Landscape Report.

1. Have an accountable individual at Board Level
2. Have a counter fraud strategy submitted to the centre
3. Have a fraud risk assessment
4. Have a fraud policy and response plan
5. Have an annual action plan
6. Have outcome based metrics
7. Have well established reporting and recording routes
8. Report identified loss and recovery to the centre
9. Have agreed access to trained investigators
10. Undertake activity to try and detect fraud in high risk areas
11. Ensure all staff have access to fraud awareness training
12. Have agreed access to trained investigators

Government Counter Fraud Function

Fraud Risk, Measurement & Assurance – the measure of it

Fraud Measurement and Assurance (FMA) seeks to take away this uncertainty of the unknown fraud rates and uncover the areas where money is being lost, so that public bodies can take informed preventative action.



- Identify high risk spend areas in your organisation
- Score them against the provided risk categories
- Select one area of spend to use for the next step

- Undertake a detailed fraud risk assessment on the selected spend area
- Identify fraud risks, controls, risk, available evidence to test
- Decide which of these to test

- Undertake testing on selected fraud risks
- Produce a report on the findings
- Define value and percentages of any cases of fraud and error that are found

Government Counter Fraud Function

Arcing to improvement

The function

Presents standards that drive accountability

Creates the need to manage risk

Requires the use of data analytics

Drives prevention and improves investigation

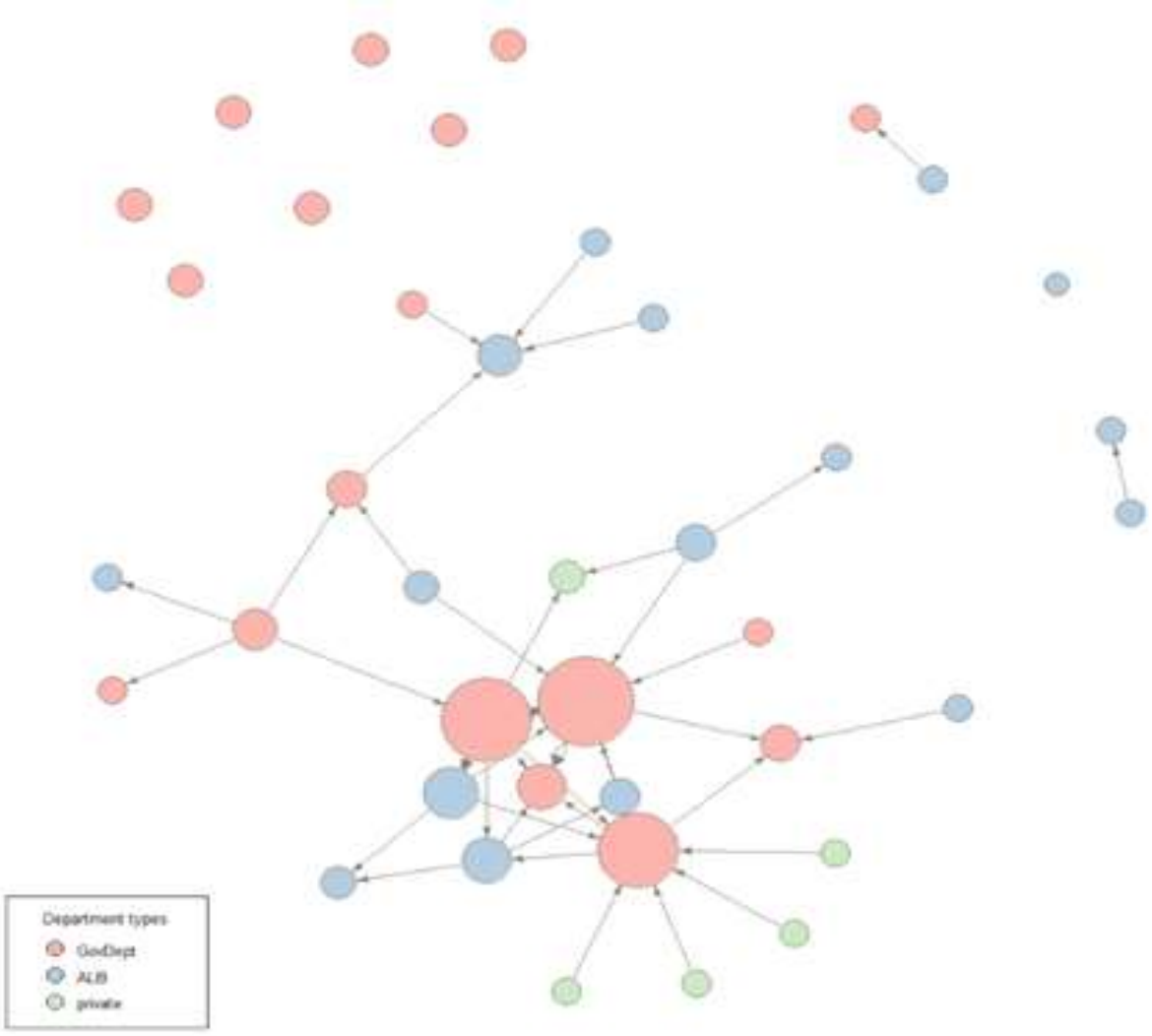
1	2	3	4	5	6
7	8	9	10	11	12

Government Counter Fraud Function

Government's capability challenge

In June 2017 and again in May 2019 we engaged with all major government departments to see how data was being shared to prevent fraud.

This showed us who was already working on using data to counter fraud and where to focus our efforts.



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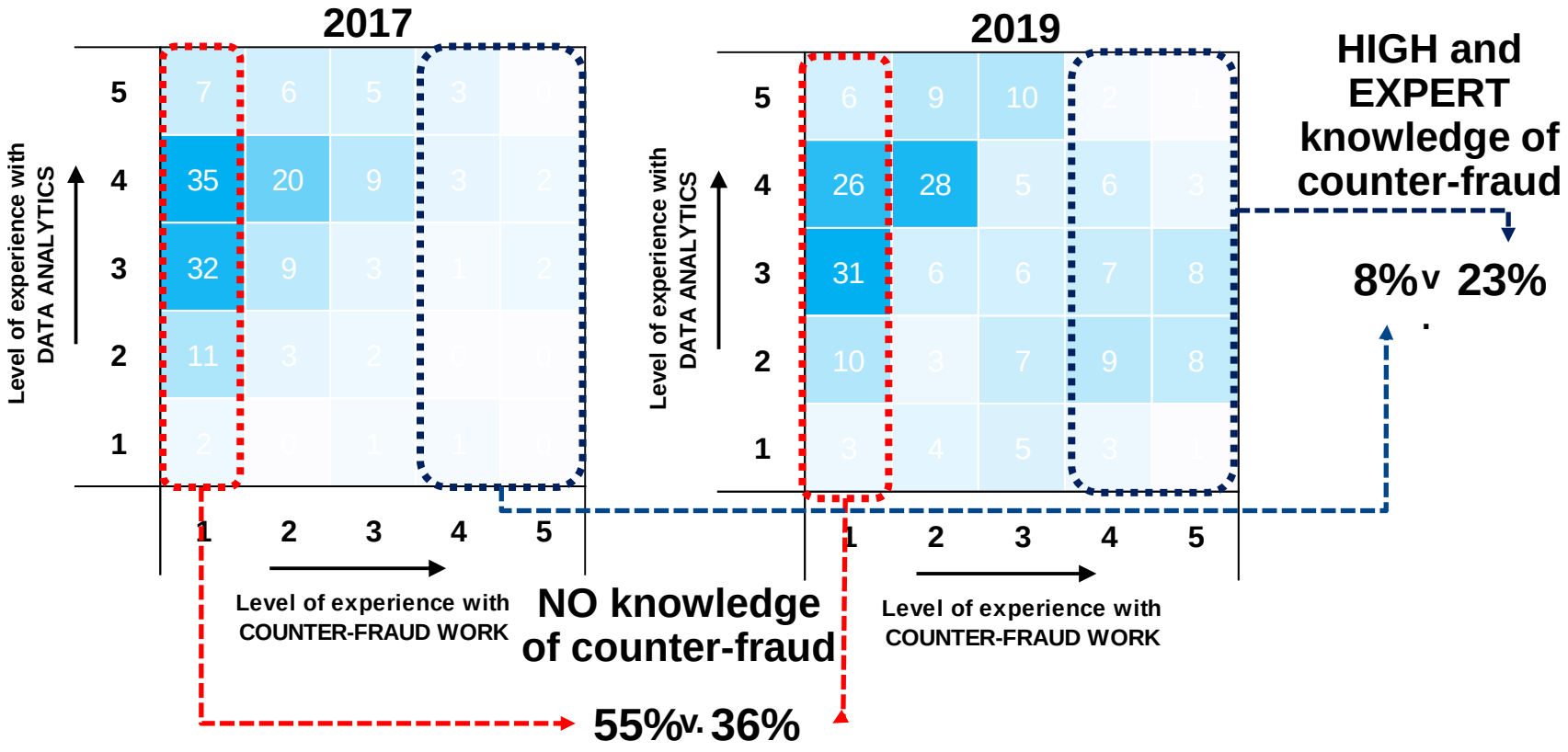
The analytical challenge

Self-identified level of expertise in data analytics and in counter fraud.



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Government Counter Fraud Function

We learned about Government's capability to share data and the challenges

The Organisational Context

There are a variety of digital approaches and analytical techniques available to run a counter fraud data sharing pilot. The challenge is that there is little knowledge or understanding of how to use them effectively, and that knowledge is inconsistent.

- Data analytics capability across Government is inconsistent
- HM Revenue & Customs, the National Health Service, and a few other organisations have good capability to run analytical projects, but most are still maturing that capability.
- The structure of government has created silo working. There is no formal cross-government network for counter fraud analytics.

The Challenges of Using Data Analytics

Data, digital and technology challenges

- There is limited understanding of what data is available
- Data quality is varying and unclear
- There are differences in the speed of adoption of digital solutions.
- There is mixed understanding on how to access data and describe how it will be used

Legal and data protection challenges

- There are limited legal powers to share data
- Groups are overly protective of data

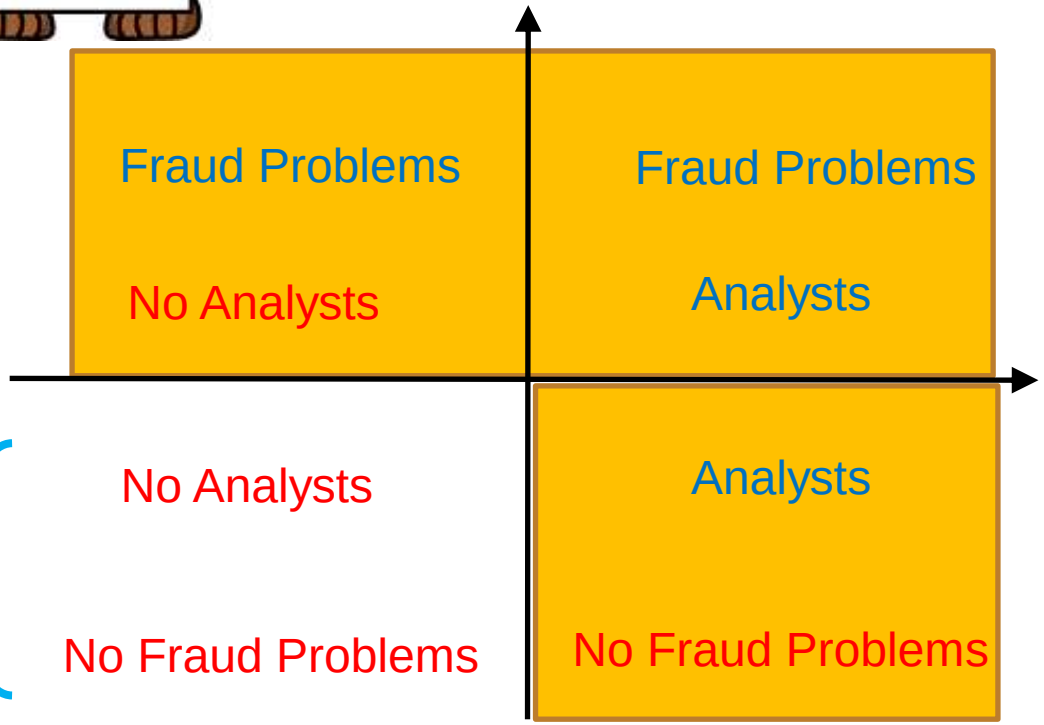
Government Counter Fraud Function

The Monkey Puzzle

Increasing recognition of fraud (from ignorance to openness)

Data access and data analytics challenge

Capability and measurement challenge



Increasing analytical Capability (beyond the power of 1)

Government Counter Fraud Function

The three unwise monkeys.

Problem 2

Would share data if I could

...by defining and sharing the knowledge that allows projects to be effective.

To develop in government the proficiency to use data and analytics more effectively in countering fraud...

...by supporting data sharing projects between government organisations

...by providing the means to share data to prevent fraud.

Problem 1

Can't share data, won't share data

Problem 3

Can share data, don't know how

Digital Economy Act 2017

Government Counter Fraud Function

A new pilot paradigm

The approach is designed to be easily repeatable

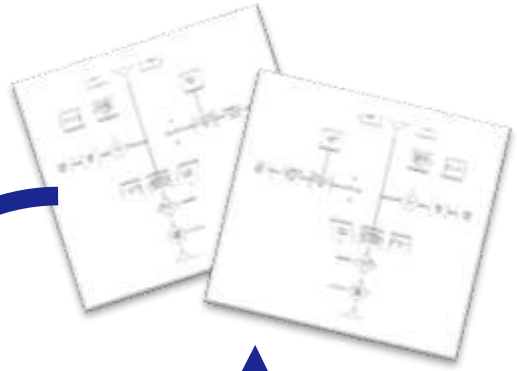
1. Fraud Business Analysis provides a common approach for fraud pilot's evaluation and comparison

2. The repeatable use of commonly agreed documentation allows for rapid establishment of a project

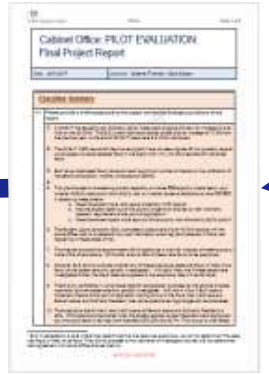
3. Allowing for re-use of a common plan, speeding project delivery

4. A multipurpose data specification, speeds legal agreements and supports re-use of code, providing faster and cheaper delivery

5. Providing for better comparison of analytics and data



6. Evaluations to a common framework allowing comparative analysis



- Analyst community
- Counter fraud community
- Operational community

3 – 6 month cycle

Government Counter Fraud Function

A new pilot paradigm delivers

7 pilots in 2018-19, across 6 government depts and 3 administrations

£17.5m of fraud & error identified loseses from the pilots alone

£117m of estimated fraud & error losses annually

Student Finance Fraud (3 Pilots)

Purpose: To identify applicants mis-declaring their income, undeclared individuals relevant to the application and applicants not eligible based on where they live.

HM Revenue & Customs – Employment Earnings & Self Assessment Data

EQUIFAX – Credit Reference Agency Data

Cabinet Office – National Fraud Initiative Data

1. Wales Education Maintenance Allowance:	2. Scotland Higher Education Student Finance Awards:	3. Wales Higher Education Student Finance Awards:
Fraud & Error	**Fraud & Error**	**Fraud & Error**
£1.86m (6.6%)	**£6.8m (1.56%)**	**£1.9m (0.7%)**

Landlord Registration Fraud

Purpose: To identify Landlords who have failed to register on the Rent Smart Wales Database

Landlord Registration Data → Housing Benefit Data → **Fraud & Error: £0.91 m (9.10%)**

Statutory Accounts Shadow Accounting Fraud

Purpose: Digital Economy Act Pilot to identify companies who have fraudulently submitted statutory accounts information to Companies House, HMRC or both.

HM Revenue & Customs Statutory Accounts Data → Companies House Statutory Accounts & Back Office Data → **Fraud & Error: £100.6m (N/A*)**

Help to Buy Application Fraud

Purpose: Digital Economy Act Pilot to identify help to buy applicants not declaring other residential properties that they own.

HM Revenue & Customs Employment Earnings, Stamp Duty Land Tax & Self Assessment Data → Homes England Help to Buy Application Data → **Fraud & Error: £4.9m (0.13%)**

Young Farmer Grant Application Fraud

Purpose: To identify if persons identifying as young farmers exist and are under the age of 40.

Department for Environment Food & Rural Affairs Young Farmer Grant Application Data → EQUIFAX Credit Reference Agency Data → Cabinet Office National Fraud Initiative Data → **Fraud & Error: £0.07 m (2%)**

Government Counter Fraud Function

Thought paper

Why ?

After 3 years of running pilots across government, building capability and working with external bodies, we had developed an understanding of the challenges government faced in using data analytics to counter fraud. We wanted to better understand:

- where industry thought we could be,
- where academia thought we should be going
- what the public thought about it all.

How ?

Written with public and private stakeholders

- Outline of our work, challenges identified
- Context case studies in government and fraud sector
- Invitation to contribute

April 2019	June 2019	August 2019	October 2019	December 2019	March 2020
Paper Drafted	Paper Published	Outreach to public interest groups	Consultation closed	Election	International Counter Fraud Data Analytics Conference

Government Counter Fraud Function

Thought paper

The work of the Data Analytics Development team across government enabled us to develop an understanding of areas of friction.

Surveys carried out by us in 2017 and again in 2019, as well as insight from our Counter Fraud Analyst Forum, and general exposure to departmental issues through our piloting work were collated and captured as 5 key challenges:

- Data Mind-set
- Data capabilities
- Data ethics
- Data access
- Data Quality

We wanted to open a public discussion on this to understand and explore wider views on tackling these 5 key challenges.

The National Audit Office also published a paper on government's use of data. It's view supported our perception of the fraud world: data was not being fully exploited.

Government Counter Fraud Function

Will the real Graeme Thomson……

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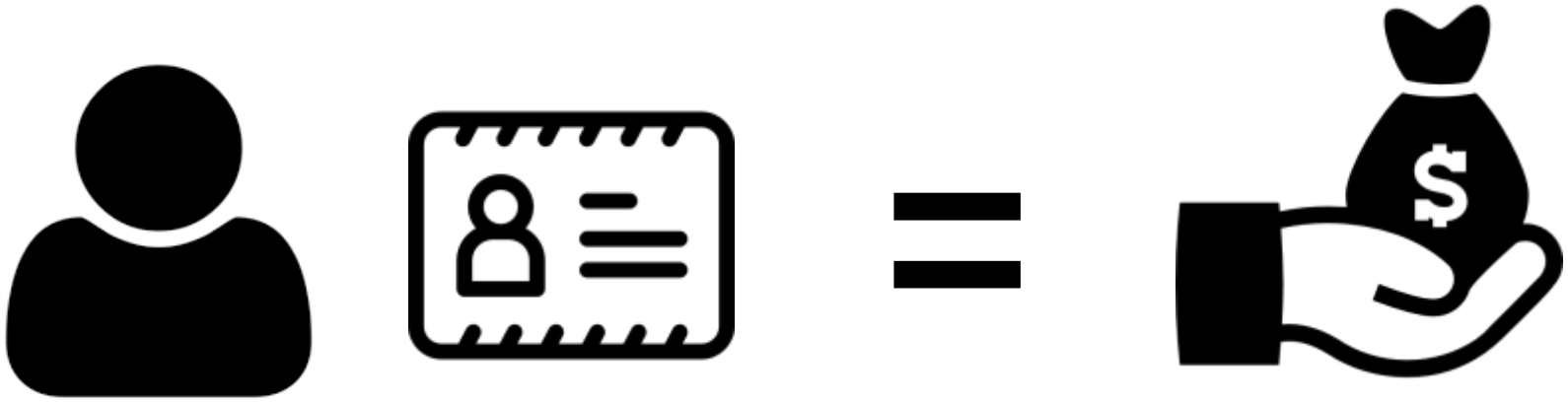
Different strokes



Government Counter Fraud Function

The importance of being earnest

Government Counter Fraud Function

The Development of Digital Identity Solves a Number of Problems for Many Sectors

Combating fraud

Real-time authentication based on common standards increases security for individual firms and, with market alerts, across the broader market

Improving customer experience

Common standards provide portability to smooth customer journeys within banks and across the market, while increasing social and financial inclusion

Delivering income

Data validated against trusted standards can be traded or monetised with increased market value. Interoperability opens international trade

Improving compliance

Provides higher quality screening than current onboarding processes, with reduced operational risk for the firms

Reducing costs

Reduces the costs of customer onboarding and duplication of processes within firms

An opportunity for government and private to partner to ensure the right legal, regulatory, policy, business, technical and operational models, in order to facilitate significant scale of digital identities and add more than £50bn to the UK economy

Government Counter Fraud Function

A transformation in HMRC

‘HM Revenue and Customs (HMRC) uses AI to support a number of activities including: identifying risks on some large-scale transactional services, such as repayment claims for Value Added Tax (VAT) and Income Tax

Self Assessment; using analytics to help identify risks that need attention and building case packages that are passed to teams of investigators. AI also works well to assimilate large amounts of data – this is a newer implementation, important for compliance casework where HMRC are using AI alongside other tools like geo-mapping.

From a technical perspective, cloud computing is removing many of the barriers. However, there is a growing conversation in industry around the ethical adoption of AI and what that means.

HMRC set up a working group across our organisation to build greater awareness around the ethics issues and consider the governance needed.

As AI technology matures further, it will undoubtedly bring different ways of working, which will bring different cultural and educational challenges.

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Transforming DWP

DWP have been focusing on digital transformation and making huge strides in its use of artificial intelligence.

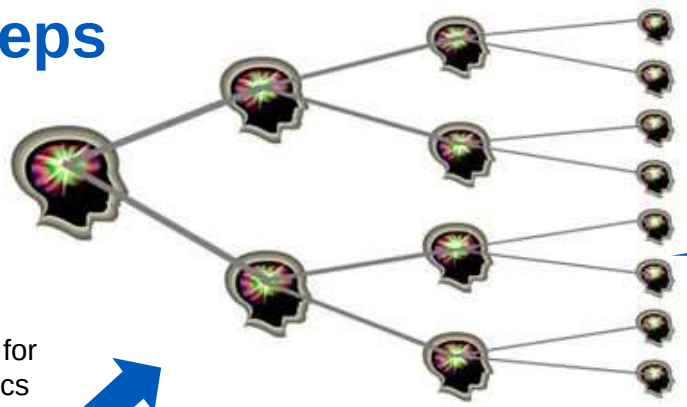
DWP have developed cutting-edge artificial intelligence to crack down on organised criminal gangs committing large-scale benefit fraud.

They have carried out trials using algorithms that can identify different types of organised attacks on the welfare system. The algorithms reveal fake identity-cloning techniques that are commonly used by fraudsters, which are only detectable by intelligent computer programmes capable of searching for anomalies in billions of items of data.

DWP have indicated trials of an AI system that detects fraudulent claims by searching for certain behaviour patterns, such as benefit applications that use the same phone number, or are written in a similar style. Any suspicious activity is then flagged up to specialist investigators.

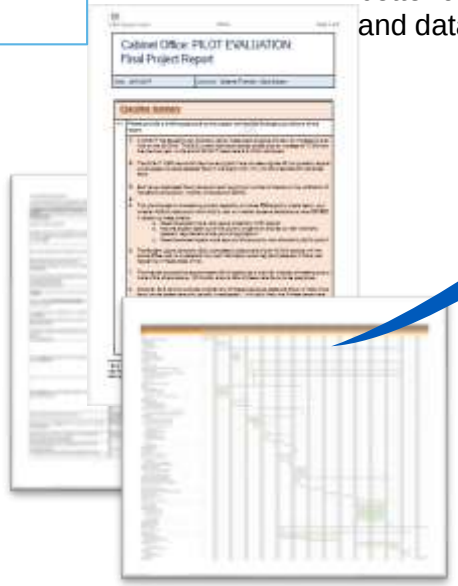
Government Counter Fraud Function

A journey of 1000 steps



1. Identify common fraud and error themes

Evaluations to a common reusable standard provides for better comparison of analytics and data.



Fraud Business Analysis provides a common approach for fraud pilot's evaluation and comparison

Evaluations support new and innovative pilots being developed on the knowledge of previous pilots leading to rapid development of new pilots and adoption of outcomes.

2. Implement structure to support learning from others experience

Cross Government Analytical Forum, shares knowledge and encourages new innovative pilots

The use of reusable and commonly agreed resources allows for rapid establishment of a project, and re-use of code and legal agreements

Best practice guide grows pilot and analytics capability.

Government Counter Fraud Function

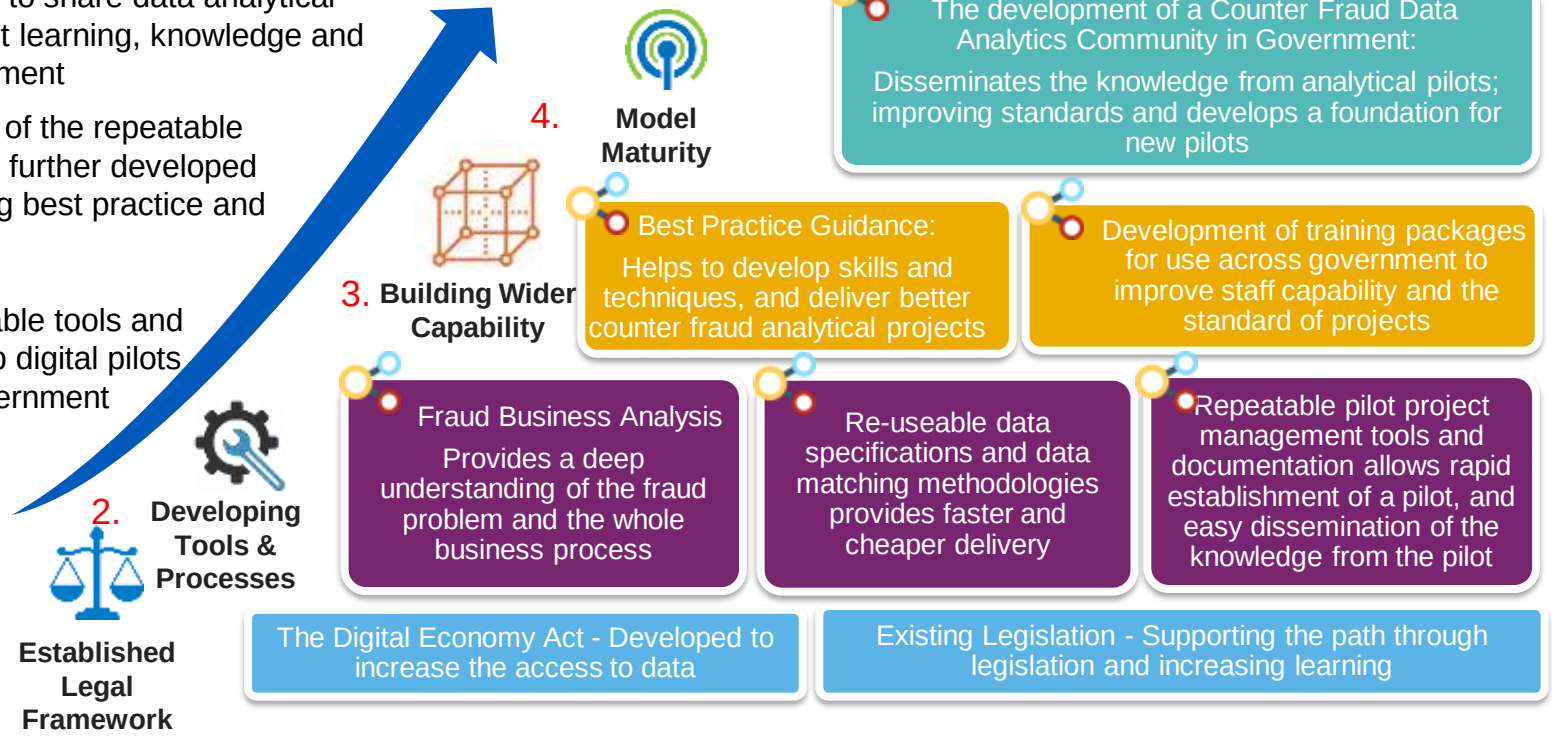
A new model for government

We are now moving to share data analytical counter fraud project learning, knowledge and tools that we have developed across government by acting as a resource librarian.

We are now moving to share data analytical counter fraud project learning, knowledge and tools across government

Building on success of the repeatable tools we have taken further developed capability by defining best practice and developing training

We have built re-usable tools and resources to develop digital pilots for fraud across government



Government Counter Fraud Function

The Government Counter Fraud Profession

Over the past three years specialists from over 100 organisations (comprising of both private and public sector) have come together to develop and agree a structure for the Government Counter Fraud Profession.

This includes:

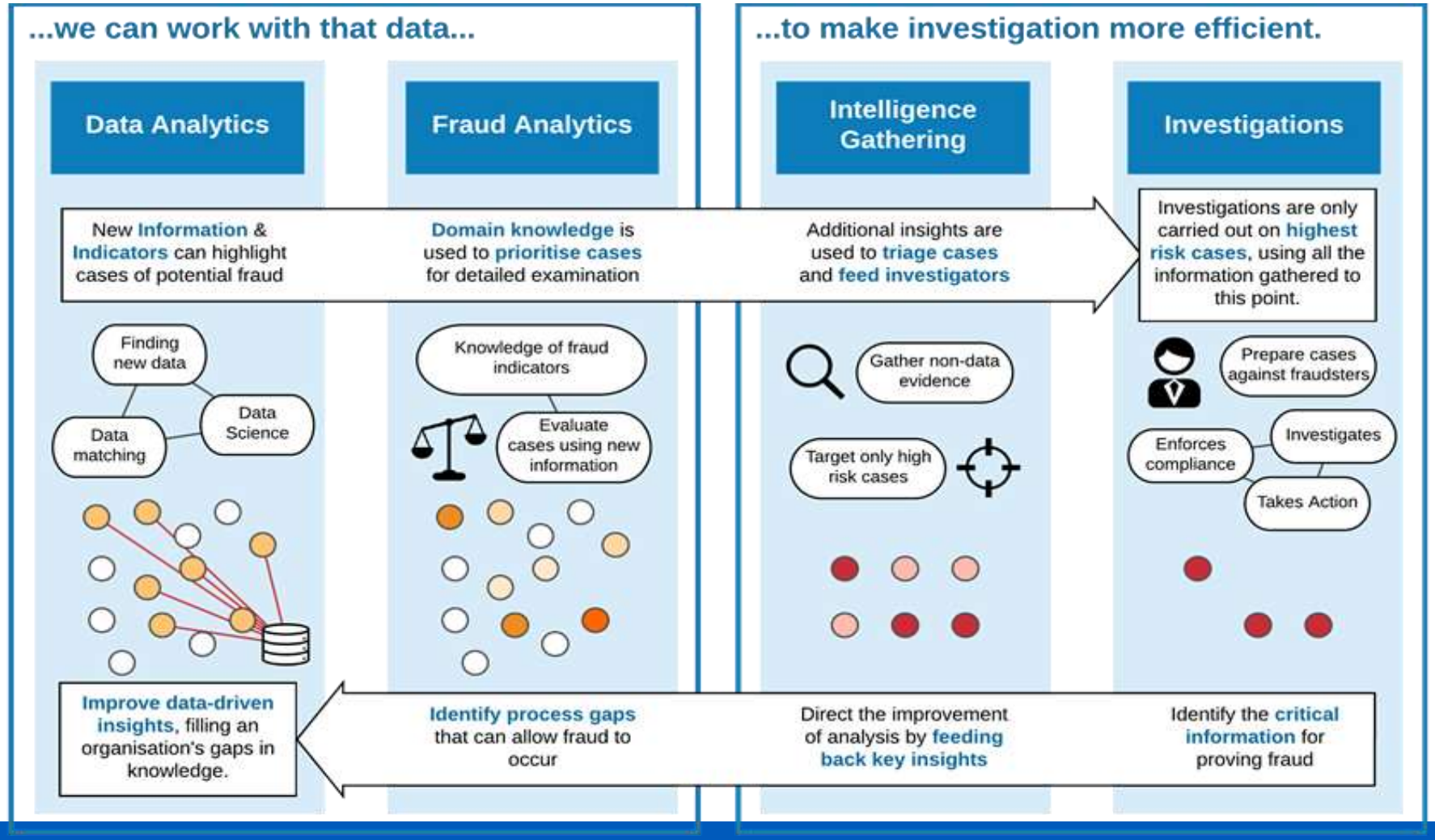
- Governance arrangements
- A framework of disciplines
- Common Professional standards and guidance

The structure creates development opportunities for counter fraud specialists, enabling them to identify new and existing skills and build career pathways in their current discipline (e.g. investigation) and beyond (e.g. data and analytics or fraud risk assessment). As the Profession matures it will expand the standards and guidance on offer to specialists and provide tools and products to aid learning and development.

Professional Standards & Competencies

Government Counter Fraud Function

The next steps: professionalising data analytics



Government Counter Fraud Function

In summary

Whilst there are challenges, there are significant opportunities for identity fraud prevention through;

The development of government counter fraud data and digital capability

The better understanding of fraud risk

The design and delivery of counter fraud data pilots that quickly test and develop innovative counter fraud solutions before permanent deployment

The continued development and identity standards and the uptake of digital identity with trusted partners

The professionalisation of counter fraud data analytics